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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/760,426 | 01/12/2001 | David J. Legare | 102P013 | 2329 |

7590

05/15/2003

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EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/760,426

Applicant(s)

LEGARE, DAVID J.

Examiner

Alicia Chevalier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 5,13 and 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

RESPONSE TO AMENDMENT

WITHDRAWN REJECTIONS

1. The objection to the abstract of record in paper #6, page 2, paragraph #2 have been withdrawn due to Applicant's amendment in paper #8.

REJECTIONS REPEATED

2. The 35 U.S.C. §102 rejection of claim 1 as anticipated by Bjorhang et al. (4,902,445) is repeated for reasons previously of record in paper #6, pages 2-3, paragraph #4.

Bjorhang discloses a fiber board which is considerably improved flame resistant comprises a mixture of water glass binder, calcium chloride, and fillers and hydrophobing agents (wicking agent). The water glass composition is composed of a sodium silicate solution with a preferred dry content range 40-60% and the most preferred silicate is sodium water glass in which the ratio of SiO₂ to Na₂O is in the range of 3.5-1.4. See column 1, line 36 to column 2, line 29.

3. The 35 U.S.C. §103 rejection of claims 1-4 over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445) is repeated for reasons previously of record in paper #6, pages 3-4, paragraph #6.

Kallstrom discloses a fire resistant wall element comprising outer layer phase conversion material, a layer of polyurethane foam, and an inner layer of phase conversion material (figure 1). The phase conversion material can contain sodium silicate water glass and a glauber salt (col. 3, lines 32-41). The outer layer has a thickness of 30 mm (1.2 inch), the intermediate wall

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has a thickness of 20 mm (0.8 inch), and the inner layer has a thickness of 10 mm (.4 inch) (col. 5, line 64 to col. 6, line 7).

Kallstrom fails to disclose that the outside layer comprises water glass, calcium chloride, and wicking agent.

Bjorhang discloses a fiber board which is considerably improved flame resistant comprises a mixture of water glass binder, calcium chloride, and fillers and hydrophobing agents (wicking agent). The water glass composition is composed of a sodium silicate solution with a preferred dry content range 40-60% and the most preferred silicate is sodium water glass in which the ratio of SiO_2 to Na_2O is in the range of 3.5-1.4. See column 1, line 36 to column 2, line 29.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the composition of Bjorhang as the outer layer of Kallstrom because of its considerably improved flame resistance.

4. The 35 U.S.C. §103 rejection of claim 6 over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445) and further in view of Randall (4,037,650) is repeated for reasons previously of record in paper #6, page 4, paragraph #7.

Kallstrom and Bjorhang disclose all the limitations of the instant claimed invention except that inner layer comprising dibasic and tribasic sodium phosphate and water.

Randall discloses an improved heat resistant composition comprising an aqueous solution of a mixture of trisodium (ortho) phosphate dodecahydrate and disodium hydrogen (ortho) phosphate dodecahydrate (col. 3, line 62 to col. 4, line 33).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the composition of Randall as the composition of Kallstrom's inner layer because of its improved heat resistance.

5. The 35 U.S.C. §103 rejection of claim 7 over Bjorhang et al. (4,902,445) in view of Sugano et al. (4,409,197) is repeated for reasons previously of record in paper #6, pages 4-5, paragraph #8.

Bjorhang discloses all the limitations of the instant claimed invention except that the outer wall also comprises dibasic sodium phosphate.

Sugano discloses a sodium carbonate solution with water and at least one salt (abstract) for excellent storage stability. These salts can be a mixture of sodium silicate (water glass), sodium phosphate dibasic, and sodium phosphate tribasic (col. 3, lines 28-39).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add sodium phosphate dibasic to composition of Bjorhang to improve the storage stability.

6. The 35 U.S.C. §103 rejection of claims 8 and 9 over Bjorhang et al. (4,902,445) in view of Sugano et al. (4,409,197) and further in view of Markusch et al. (3,981,831) is repeated for reasons previously of record in paper #6, page 5, paragraph #9.

Bjorhang and Sugano disclose all the limitations of the instant claimed invention except that the outer wall also comprises calcium metasilicate and propylene glycol.

Markusch discloses adding propylene glycol and calcium metasilicate to a flame resistant material to improve dimensional stability.

It would have been obvious to one of ordinary skill in the art the time of the invention of add calcium metasilicate and propylene glycol as taught by Markusch to the composition of

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Bjorhang and Sugano to improve dimensional stability. Selection of parts by weight of the composition is taken as being within the ordinary skill of the art absent unexpected results.

7. The 35 U.S.C. §103 rejection of claims 7-12 over Bjorhang et al. (4,902,445), Sugano et al. (4,409,197) and Markusch et al. (3,981,831) is repeated for reasons previously of record in paper #6, pages 5-7, paragraph #10.

Kallstrom discloses a fire resistant wall element comprising outer layer phase conversion material, a layer of polyurethane foam, and an inner layer of phase conversion material (figure 1). The phase conversion material can contain sodium silicate water glass and a glauher salt (col. 3, lines 32-41). The outer layer has a thickness of 30 mm (1.2 inch), the intermediate wall has a thickness of 20 mm (0.8 inch), and the inner layer has a thickness of 10 mm (.4 inch) (col. 5, line 64 to col. 6, line 7).

Kallstrom fails to disclose that the outside layer comprises water glass, calcium chloride, and wicking agent.

Bjorhang discloses a fiber board which is considerably improved flame resistant comprises a mixture of water glass binder, calcium chloride, and fillers and hydrophobing agents (wicking agent). The water glass composition is composed of a sodium silicate solution with a preferred dry content range 40-60% and the most preferred silicate is sodium water glass in which the ratio of SiO_2 to Na_2O is in the range of 3.5-1.4. See column 1, line 36 to column 2, line 29.

Sugano discloses a sodium carbonate solution with water and at least one salt (abstract) for excellent storage stability. These salts can be a mixture of sodium silicate (water glass), sodium phosphate dibasic, and sodium phosphate tribasic (col. 3, lines 28-39).

Markusch discloses adding propylene glycol and calcium metasilicate to a flame resistant material to improve dimensional stability.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add sodium phosphate dibasic to composition of Bjorhang to improve the storage stability.

It would have been obvious to one of ordinary skill in the art the time of the invention of add calcium metasilicate and propylene glycol as taught by Markusch to the composition of Bjorhang and Sugano to improve dimensional stability. Selection of parts by weight of the composition is taken as being within the ordinary skill of the art absent unexpected results.

It would have been obvious to one of ordinary skill in the art at the time of the invention to you the composition of Bjorhang as the outer layer of Kallstrom because of it's considerably improved flame resistance.

8. The 35 U.S.C. §103 rejection of claim 14 over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445), Sugano et al. (4,409,197) and Markusch et al. (3,981,831) and further in view of Randall (4,037,650) is repeated for reasons previously of record in paper #6, page 7, paragraph #11.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445), Sugano et al. (4,409,197) and Markusch et al. (3,981,831) as applied to claims 7-12 above, and further in view of Randall (4,037,650).

Kallstrom, Bjorhang, Sugano, and Markusch disclose all the limitations of the instant claimed invention except that inner layer comprising dibasic and tribasic sodium phosphate and water.

Randall discloses an improved heat resistant composition comprising an aqueous solution of a mixture of trisodium (ortho) phosphate dodecahydrate and disodium hydrogen (ortho) phosphate dodecahydrate (col. 3, line 62 to col. 4, line 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the composition of Randall as the composition of Kallstrom's inner layer because of its improved heat resistance.

ANSWERS TO APPLICANT'S ARGUMENTS

10. Applicant's arguments regarding 35 U.S.C. §102 rejection by Bjorhang et al. (4,902,445) have been carefully considered but are deemed unpersuasive.

Applicant argues that claim 1 requires a wicking agent that is hydrophilic and will bind excess water. The limitations on which Applicant relies (i.e. a wicking agent that is hydrophilic and will bind excess water) are not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable. Wicking agents are not inherently hydrophilic or hydrophobic and do not have to possess the ability to bind excess water. They merely need to have the ability to move water.

Applicant's argument that Bjorhaag teaches that all three of its generic compounds must be used in conjunction with wood fibers to form a board having improved fire resistance. And that in the absence of any one of the compounds, the compounds of Bjorhaag could not be formed into a wall as set forth in claim 1 is unclear. The fact that Bjorhaag might require limitations not required by Applicant is irrelevant since claim 1 uses open language, i.e. comprising.

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11. Applicant's arguments regarding 35 U.S.C. §103 rejection over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445) have been carefully considered but are deemed unpersuasive.

Applicant argues that the combination of Kallstrom and Bjorhaag does not disclose the claimed wicking agent. Applicant's arguments have already been addressed above.

12. Applicant's arguments regarding 35 U.S.C. §103 rejection over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445) and further in view of Randall (4,037,650) have been carefully considered but are deemed unpersuasive.

Applicant argues that Randall does not disclose a heat resistant composition and that the claimed invention uses a solid composition of dibasic sodium phosphate, tribasic sodium phosphate, and water to form an inner wall having improves heat resistance. The limitations on which Applicant relies (i.e. a heat resistant composition and that the claimed invention uses a solid composition of dibasic sodium phosphate, tribasic sodium phosphate, and water to form an inner wall having improves heat resistance) are not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable. Claim 6 merely recites "said phase change material is composed of dibasic and tribasic sodium phosphate and water." There is no recitation in the claim of heat resistance or that the sodium phosphates are in a solid phase. The fact that Applicant uses the phase change material for a different purposes does not alter the conclusion that its use in a prior art device would be *prima facie* obvious from the purpose disclosed in the reference.

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13. Applicant's arguments regarding 35 U.S.C. §103 rejection over Bjorhang et al. (4,902,445) in view of Sugano et al. (4,409,197) have been carefully considered but are deemed unpersuasive.

Applicant argues that Sugano is not analogous art as it is not reasonably pertinent to the problem the inventor was trying to solve in the instant case and it is entirely outside the realm of fire and heat protection and therefore cannot be used as a reference under 35 U.S.C. 103. The fact that Applicant uses the sodium phosphate dibasic and sodium phosphate tribasic compounds for a different purpose does not alter the conclusion that its use in a prior art device would be prima facie obvious from the purpose disclosed in the reference. Furthermore, it has been held that the determination that a reference is from a nonanalogous art is twofold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with the inventor was involved. In the instant case both references Bjorhang and Sugano deal with improving water glass compositions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add sodium phosphate dibasic to composition of Bjorhang to improve the storage stability

14. Applicant's arguments regarding 35 U.S.C. §103 rejections regarding the Bjorhang et al. (4,902,445), Sugano et al. (4,409,197), Markusch et al. (3,981,831), Randall (4,037,650) and Kallstrom (EP0222720A2) have been carefully considered but are deemed unpersuasive.

Applicant argues that the other various combinations for the 103 rejections and the motivations to make those combinations are insufficient to support a rejection of obviousness for reasons already presented. These arguments have been addressed above.

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Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

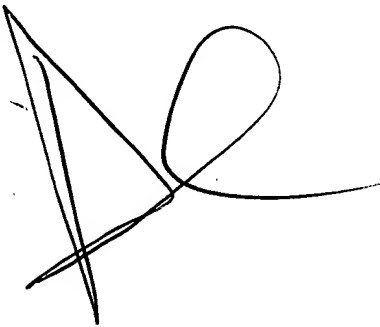
16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139. The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays


If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Harold Pyon can be reached by dialing (703) 308-4251. The fax phone number for the organization official non-final papers is (703) 872-9310. The fax number for after final papers is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0661.

ac

5/12/03




HAROLD PYON
SUPERVISORY PATENT EXAMINER
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5/14/03